Elba Stormwater Drainage System

Full Mitigation Best Practice Story

Coffee County, Alabama

Elba, AL - Originally named "Bridgeville," after the ferry that ran across the Pea River, Elba was founded around 1840, and is also the county seat of Coffee County, located in the fork between Beaver Dam Creek and the confluence of Whitewater Creek and the Pea River. Today, Elba remains a small community of 4,000 residents and is home to several manufacturers and industries.

Elba has a long history of flooding stemming from (1) failure of the town's protective ring levee, which caused major flooding throughout the downtown area, and (2) stormwater accumulation within the levee, affecting the low-lying southcentral and southwestern areas of town (as happened in 1994).

In the 1930s, the Works Progress Administration constructed a 3-mile long levee enclosing three sides of the town. At the time it was an effective measure, but today the aging levee is vulnerable in the event of a major flood. In fact, the levee failed during the March 1990 storm when Whitewater Creek overtopped its banks and caused the worst flooding the town has seen. Hundreds of buildings were flooded, and damages ranged upwards of $10 million. It took weeks of around-the-clock pumping to remove floodwaters.

With a Hazard Mitigation Grant, Elba installed a stormwater drainage system in 1997. The system was built by widening an existing drainage channel and installing two pumps at low-lying points in the town's southeast quarter. The pumps, designed to remove water quickly from flooded areas, are each capable of moving 17,500 gallons per minute.

In March 1998, a heavy storm system swept through the southeastern U.S., causing serious flooding in several Alabama counties. The small community of Elba was devastated again in the third disastrous flood in 10 years. Eight inches of rain caused nearby Beaver Dam Creek to overtop its banks, and the levee surrounding the town failed. Flood depths in the downtown area were as high as five feet, and half the town's residents were evacuated. Water levels inside the levee were over two feet throughout most of the area.

The new pumps were able to drain the area of water in approximately 4-1/2 days. Had the pumps not been available, it would have taken natural drainage and smaller pumps as long as 8 or 9 days to completely drain the area.

Elba's pump system reduced by half the time it took to drain the water from inside the levee and saved $130,000 in avoided damages from the March 1998 flood. Over the 30-year life of the project the system will likely generate savings well beyond the cost of the project.

Activity/Project Location	
Geographical Area:	**Single County in a State**
FEMA Region:	**Region IV**
State:	**Alabama**
County:	**Coffee County**
City/Community:	**Elba**

Key Activity/Project Information

Sector:	**Public**
Hazard Type:	**Flooding**
Activity/Project Type:	**Flood Control**
Activity/Project Start Date:	**07/1994**
Activity/Project End Date:	**05/1997**
Funding Source:	**Hazard Mitigation Grant Program (HMGP)**
Funding Recipient:	**Local Government**
Funding Recipient Name:	**City of Elba**

Activity/Project Economic Analysis

Cost:	**$391,114.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster?	**Yes**
Federal Disaster #:	**1034 , 07/08/1994**
Value Tested By Disaster?	**Yes**
Tested By Federal Disaster #:	**No Federal Disaster specified**
Year First Tested:	**1998**
Repetitive Loss Property?	**Unknown**

Reference URLs

Reference URL 1:	**http://www.floodsmart.gov/**
Reference URL 2:	**http://www.floods.org/Publications/mit%20succ%20stories/mssiiial.htm**

Main Points

- Elba has a long history of flooding stemming from (1) failure of the town's protective ring levee and (2) stormwater accumulation.
- Constructed a 3-mile long levee enclosing three sides of the town and installed a stormwater drainage system by widening an existing drainage channel and installing two pumps at low-lying points.
- Elba's pump system reduced by half the time it took to drain the water from inside the levee and saved $130,000 in avoided damages from the March 1998 flood. Over the 30-year life of the project the system will likely generate savings well beyond the cost of the project.